

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (Currently Amended): A telemedicine system comprising a patient-based physiological data acquisition and transmittal device connectable via a wireless network to transmit physiological data to a remote server, wherein the patient-based physiological data acquisition and transmittal device comprises:

an electronic physiological data acquisition unit which, under the control of a patient, measures for measuring a physiological parameter of the [[a]] patient to acquire and output data representing the parameter;

a secure data store;

a wireless transmitter which upon receiving the output data from the data acquisition unit automatically transmits the output data via the wireless network to the remote server; and

a display for displaying to the patient the data and messages ~~a message~~ related to the patient's condition,

wherein, if a connection to the wireless network is unavailable, the electronic physiological data acquisition unit performs the measurement, acquisition and output of data, and the patient-based physiological data acquisition and transmittal device stores the data in the

secure data store and automatically transmits the stored data later when a connection to the wireless network is available,

wherein the remote server comprises a data analyzer and an automatic message generator to generate the messages,

wherein the data analyzer automatically performs trend analysis of the data with reference to trends tuned to each patient's characteristics, and

wherein the automatic message generator provides automated responses to the patient-based physiological data acquisition and transmittal device based on the patient's condition as obtained from the data analyzer, the messages comprising questions to initiate interaction with the patient and being changeable by automatic download controlled by the server in response to changes in the patient's condition as measured by the electronic physiological data acquisition unit

~~wherein the system analyzes the output data automatically with reference to known trends for the patient, the analyzing being tuned to the patient's characteristics, and, in response, automatically generates and displays on said display said message related to the patient's condition, and~~

~~wherein the system further sends information from the server to the patient-based physiological data acquisition and transmittal device for display thereon to initiate interaction with the patient, the information comprising one or more questions for the patient to answer.~~

Claim 2 (Currently Amended):        A telemedicine system according to claim 1 wherein the wireless transmitter is adapted to receive automatically the output data from the physiological data acquisition unit on data acquisition thereby, and thereupon automatically to

transmit the output data immediately in real time to the remote server if the connection to the wireless network is available.

Claim 3 (Previously Presented): A telemedicine system according to claim 1 wherein the wireless transmitter is adapted to establish a connection to the wireless network automatically when it is switched on and to maintain the connection while switched on.

Claim 4 (Previously Presented): A telemedicine system according to claim 1 wherein the wireless network is a packet-switched network.

Claim 5 (Original): A telemedicine system according to claim 4 wherein the wireless network is a public network.

Claim 6 (Previously Presented): A telemedicine system according to claim 5 wherein the wireless network is a General Packet Radio Service (GPRS) network.

Claim 7 (Previously Presented): A telemedicine system according to claim 1 wherein the wireless network is one of a 3G, a PDC-P and an EDGE network.

Claim 8 (Currently Amended): A telemedicine system according to claim 1 wherein the wireless transmitter is one of a cellular telephone and a PDA [[pda]].

Claim 9 (Currently Amended): A telemedicine system according to claim 8 wherein a software application is provided on the one of a cellular telephone and a PDA [[pda]] to interface with the physiological data acquisition unit and to control data transmission to the remote server.

Claim 10 (Previously Presented): A telemedicine system according to claim 1 wherein the patient-based data acquisition and transmittal device is adapted to check the acquired data for compliance with preset conditions.

Claim 11 (Original): A telemedicine system according to claim 10 wherein the preset conditions relate to the quality or completeness of the data or the condition of the patient.

Claims 12 and 13 (Canceled).

Claim 14 (Currently Amended): A telemedicine system according to claim 1 wherein the remote server processes the data to check the condition of the patient and responds with said messages ~~message~~ related to the patient's condition via the wireless network.

Claim 15 (Previously Presented): A telemedicine system according to claim 1 wherein the remote server formats the data for delivery and display to a clinician.

Claim 16 (Canceled).

Claim 17 (Original): A telemedicine system according to claim 16 wherein the data analyser comprises a Kalman smoother for smoothing the data.

Claim 18 (Previously Presented): A telemedicine system according to claim 1 wherein the physiological data acquisition unit is one of: an electronic flow meter for recording Peak Expiratory Flowrate, an electronic blood glucose meter, a blood pressure monitor, and a heart rate monitor.

Claim 19 (Previously Presented): A telemedicine system according to claim 1 wherein the physiological data acquisition unit and wireless transmitter are integrated as a single device.

Claim 20 (Previously Presented): A telemedicine system according to claim 1 wherein the data sent from the wireless transmitter is time stamped with reference to a secure clock.

Claim 21 (Original): A telemedicine system according to claim 20 wherein the secure clock is provided in the patient-based physiological data acquisition and transmittal device.

Claim 22 (Canceled).

Claim 23 (Previously Presented): A telemedicine system according to claim 1 wherein the data sent from the wireless transmitter is digitally signed.

Claim 24 (Previously Presented): A telemedicine system according to claim 1 wherein the data sent from the wireless transmitter comprises the location of the wireless transmitter.

Claim 25 (Previously Presented): A telemedicine system according to claim 24 wherein information is sent from the server to the patient-based physiological data acquisition and transmittal device for display thereon and is adapted depending on the location of the wireless transmitter.

Claim 26 (Canceled).

Claim 27 (Previously Presented): A telemedicine system according to claim 1 wherein further information is sent from the server to the patient-based physiological data acquisition and transmittal device, and wherein in dependence upon the physiological parameter measurement and transmission to the server the further information comprises a prescription for medication.

Claims 28-35 (Canceled).

Claim 36 (Currently Amended): A telemedicine method comprising:

measuring, under patient control, a physiological parameter of a patient using a patient-based device to acquire and output data representing the parameter;

automatically wirelessly transmitting the output data via a wireless network to a remote server and, if a connection to the wireless network is not available, storing the data in a secure data store and transmitting the stored data later when a connection to the wireless network is available;

receiving from the remote server automated messages related to the patient's condition obtained by an automatic, patient-tuned analysis of the data with reference to known trends for the patient, the messages comprising questions to initiate interaction with the patient and which change automatically under server control in response to measured changes in the patient's condition;

~~receiving from the remote server a message related to the patient's condition obtained by an automatic, patient-tuned analysis of the data with reference to known trends for the patient;~~

displaying, via a display of the patient-based device, the received messages ~~message~~ ~~related to the patient's condition; and~~

~~initiating interaction with the patient according to information received from the server based on the analysis, the interacting comprising displaying one or more questions.~~

Claim 37 (Currently Amended): A patient-based physiological data acquisition and transmittal device connectable via a wireless network to transmit physiological data to a remote server, the patient-based data acquisition and transmittal device comprising:

an electronic physiological data acquisition unit which, under control of a patient, measures for measuring a physiological parameter of a patient to acquire and output data representing the parameter;

communication circuitry which, upon receiving the output data from the data acquisition unit, automatically transmits the output data via the wireless network to the remote server and which receives from the remote server automated messages ~~a message~~ related to the patient's condition obtained by an automatic, patient-tuned analysis of the output data with reference to known trends for the patient, the messages comprising questions to initiate interaction with the patient and which change automatically under server control in response to measured changes in the patient's condition; and

a secure data store; and

a display for displaying to the patient the data and the messages ~~a message~~ related to the patient's condition,

wherein, if a connection to the wireless network is unavailable, the electronic physiological data acquisition unit performs the measurement, acquisition and output of data, and the patient-based physiological data acquisition and transmittal device stores the data in the secure data store and automatically transmits the stored data later when a connection to the wireless network is available

~~wherein the device initiates interaction with the patient according to information received from the remote server based on the analysis, the interaction comprising a display of one or more questions.~~